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New Rooftops that Generate Electricity

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If you're looking to install a new roof this year consider a rooftop made of strong, weather-resistant tiles that also generate electricity for your home. Gaining popularity with major homebuilders, like US Homes and Pardee Homes, building integrated photovoltaics (BIPV) take the form of traditional building and roofing materials. "What consumers love about this type of installation is that they get maintenance-free clean energy integrated into a beautiful new roof," explains Joe Morrissey of Atlantis Energy Systems. Plus the tiles are non-polluting and won't harm the environment.

If lower monthly electric bills are important to you, you'll be happy to know that during the day when your system produces more electricity than your home uses, the electric meter spins in reverse as the excess power is delivered to the power grid. This is called net metering, and it allows customers of Pacific Gas and Electric Company to receive a credit for the power delivered to the grid and continue purchasing power as needed. At the end of the year, customers pay the difference between what is sent to the grid and what is purchased.

Your roofer and electrician can handle the installation. The tiles are wired together and fed through an inverter box that transfers the electricity out to your electric meter. The inverter box is usually stored in the garage or a location close to the array of tiles.

Before you install a BIPV system on your roof, here are some things you should know to get the greatest benefits from your sun-capturing system. First, make sure energy efficiency is already part of your home. Are you currently using energy-efficient lighting and appliances, proper insulation, weather stripping, dual-pane windows or other types of energy efficient products in your home? These measures will ensure maximum performance of your home's energy use and provide the quickest payback from your investment. Second, determine the position of your roof. South facing roof space and

slopes from flat to 60 degrees are ideal for BIPV roofing. East and west facing roof space can certainly accommodate a BIPV system but with slightly lower efficiency. For maximum performance make sure the panels have unobstructed access to the sun. Vents, chimneys, skylights and other roof penetrations, as well as shaded areas from adjoining buildings or trees should be avoided. The tiles are designed to produce electricity in direct sunlight and on cloudy days – something especially important during Northern California's hazy days.

So what size system do you need for your home? An average system is 2.0 – 3.5 kilowatts, enough to provide a 2,200 square foot home with 50-70 percent of its electrical needs. Total system costs can range from $11,000 – $24,000 depending on your energy needs, your household size and your home size.

The initial cost is high, but in essence you are really just paying for your energy needs up front rather than over a long period of time. This could be a real value given the uncertainty of future electricity costs. And with warranties that last longer than most conventional rooftops, you're looking good financially. Additionally, the California Energy Commission offers rebates of $4.50 per watt, or up to 50 percent of the cost of an installed system, whichever is less. Your rebate applies to the combined cost of the product and the labor to install it. Available tax credits also make it a more affordable investment.

Visit www.consumerenergycenter.org or call 800-555-7794 for more information on renewable energy, rebates, and a list of qualifying products or to learn about other homeowners who've already taken the leap to solar and are enjoying natural energy from the sun.

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